Ref. No.0M3365

ONKYO SERVICE MANUAL

QUARTZ SYNTHESIZED TUNER AMPLIFIER

MODEL TX-7740

Black model

SAFETY-RELATED COMPONENT WARNING!!
COMPONENTS INDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.
MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

TABLE OF CONTENTS

ONKYO® AUDIO COMPONENTS

SPECIFICATIONS

AMPLIFIER SECTION

Power output:	70 watts per channel, min, RMS, at 8 ohms, both channels driven, from 20Hz to 20kHz, with no more than 0.04% total harmonic distortion.	
Musical Power Output:	2×180 watts at 4 ohms, 1kHz (DIN)	
	2×120 watts at 8 ohms, 1kHz (DIN)	
Continuous Power Output:	2×105 watts at 4 ohms, 1kHz (DIN)	
	2×77 watts at 8 ohms, 1kHz (DIN)	
Total Harmonic Distortion:	0.04% at rated power	
	0.04% at 1 watts output	
IM Distortion:	0.04% at rated power	
	0.04% at 1 watts output	
Damping Factor:	60 at 8 ohms	
Frequency Response:	20–30,000Hz ±1dB	
RIAA Diviation:	20–20,000Hz ±0.8dB	
Sensitivity and Impedance:	Phono:	2.5mV/50 kohms
	CD:	150mV/50 kohms
	Tape Play:	150mV/50 kohms
	Tape Rec:	150mV/3.5 kohms
Phono Overload (MM):	120mV RMS at 1kHz, 0.04% THD.	
Signal-to-Noise Ratio:	Phono:	80dB (at 5mV input, IHF-A)
	CD/Tape:	102dB (IHF A)
Tone controls:	Bass:	±10dB at 100Hz
	Treble:	±10dB at 10kHz
Muting	–∞	

TUNER SECTION

FM:

Tuning Range:	87.50–108.00MHz (50kHz steps)	
Usable Sensitivity:	Mono:	11.2dBf, 1.0μV, 75 ohms
		0.9μV (S/N 26dB, 40kHz Devi.)
		75ohms DIN
	Stereo:	18.0dBf, 2.2μV, 75ohms
		23μV (S/N 46dB, 40kHz Devi.)
		75ohms DIN
50dB Quieting Sensitivity:	Mono:	18.0dBf, 2.2μV, 75ohms
	Stereo:	37.2dBf, 20μV, 75ohms
Capture Ratio:	1.5dB	
Image Rejection Ratio:	85dB	
IF Rejection Ratio:	90dB	
Signal-to-Noise Ratio:	Mono:	73dB
	Stereo:	67dB
Selectivity:	50dB DIN (±300kHz, 40kHz, dev.)	
AM suppression Ratio:	50dB	
Harmonic Distortion:	Mono:	0.15%
	Stereo:	0.25%
Frequency Response:	30–15,000Hz ±1.5dB	
Stereo Separation:	45dB at 1kHz	
	30dB at 100–10,000Hz	
Muting Level:	17.2dBf, 4.0μV	

AM:

Tuning Range:	522–1611kHz (9kHz steps)
Usable Sensitivity:	30μV
Image Rejection Ratio:	40dB
IF Rejection Ratio:	40dB
Signal-to-Noise Ratio:	40dB
Harmonic Distortion:	0.7%

GENERAL

Dimensions (W×H×D):	435×137×350mm
	17-1/8″×5-3/8″×13-3/4″
Weight:	9.0kg., 19.8 lbs.

Specifications and features are subject to change without notice.

SERVICE PROCEDURES

1. Replacing the fuses

For continued protection against fire hazard, replace only with same type and same rating fuse.

Circuit no.	Part no.	Description
F902	252075	2.5A-SE-EAK, Primary
F903	252075	2.5A-SE-EAK, AC outlet

2. Change of FM/AM band step.

With the exception of the models below, a BAND STEP selector switch is not provided.

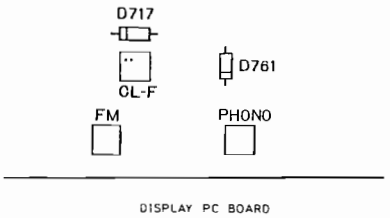
(FM)

MODEL	BAND STEP	D761
UD	200kHz→50kHz	Additional
UG/UQ	50kHz→200kHz	Eliminated

(AM)

BAND STEP	D717
10kHz→ 9kHz	Eliminated
9kHz→10kHz	Additional

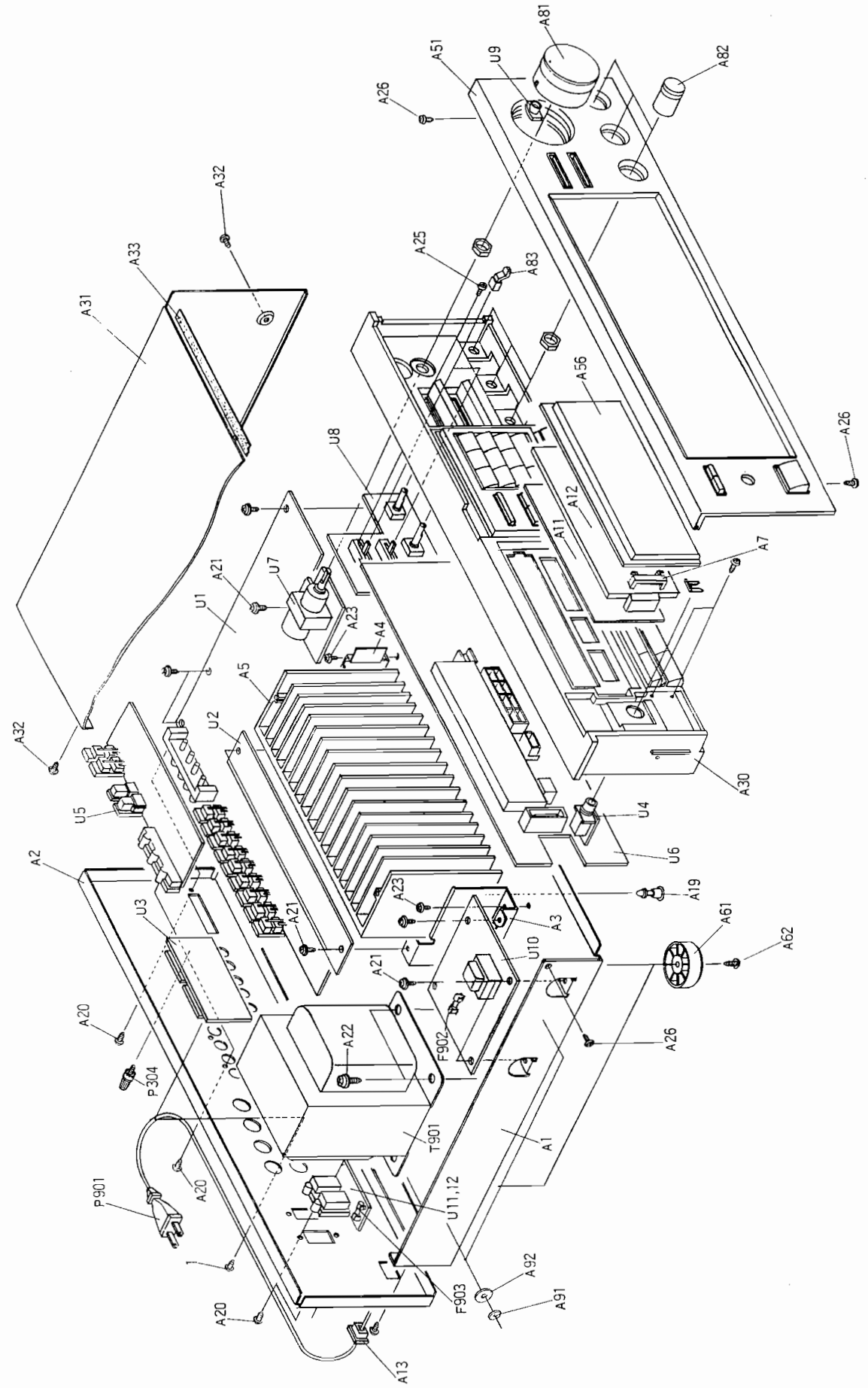
In D761 and D717 1SS133 (Part No. 223163) are used.



3. Memory preservation

This unit does not require memory preservation batteries. A built-in memory power back-up system preserves contents of the memory during power failures and even when the unit is unplugged. The unit must be plugged in and the power switch turned on and off once in order to charge the back-up system. Note that since this is not a permanent memory the power switch must be turned on and off a few times each month to keep the back-up system operative. The period of time during which memory contents are preserved after power has last been turned off varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of 3 to 4 weeks (a minimum of 2 weeks) after the last time power has been turned off. This period is shorter when the unit is exposed to very high humidity or used in an area with an extremely humid climate.

EXPLODED VIEW

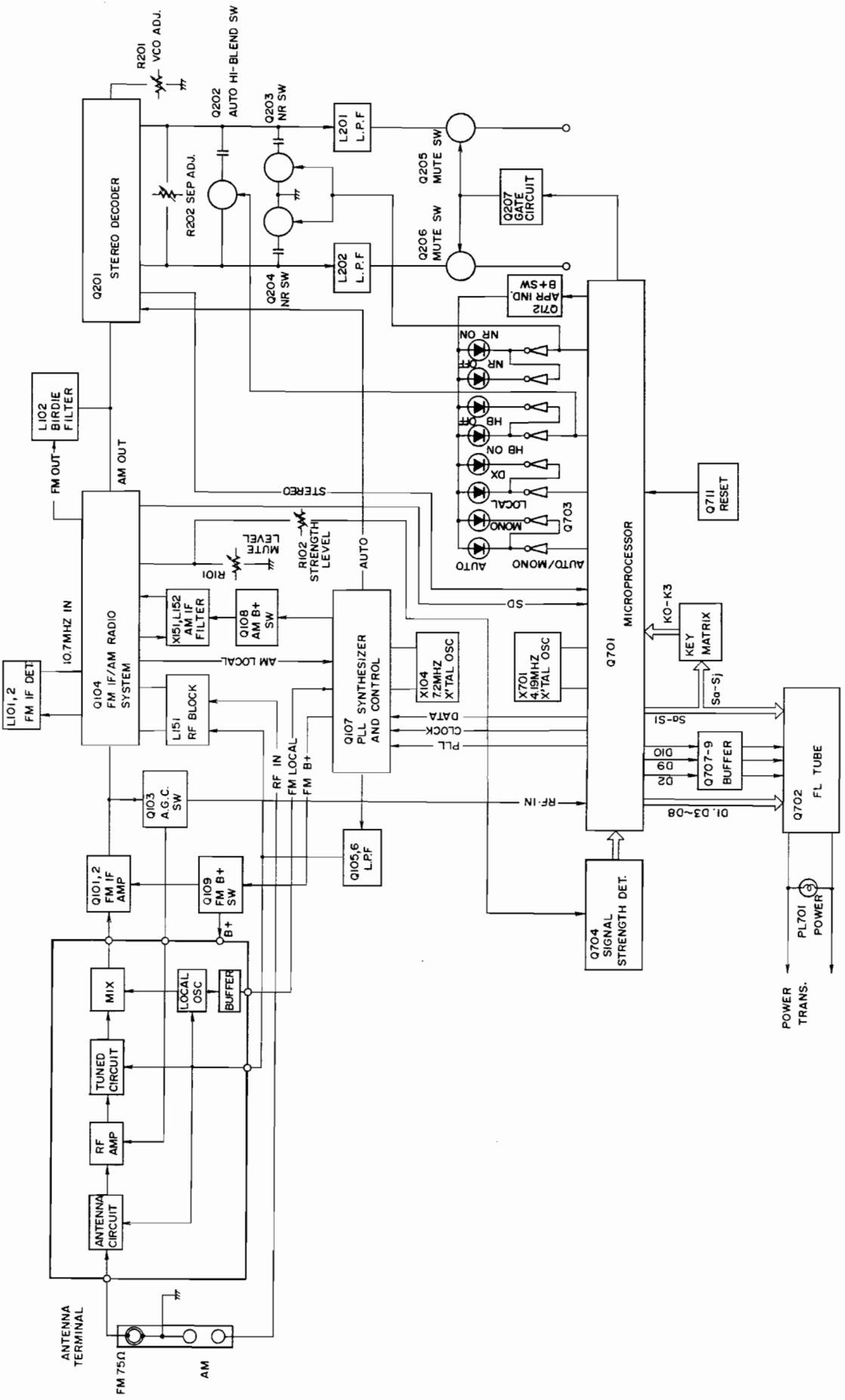


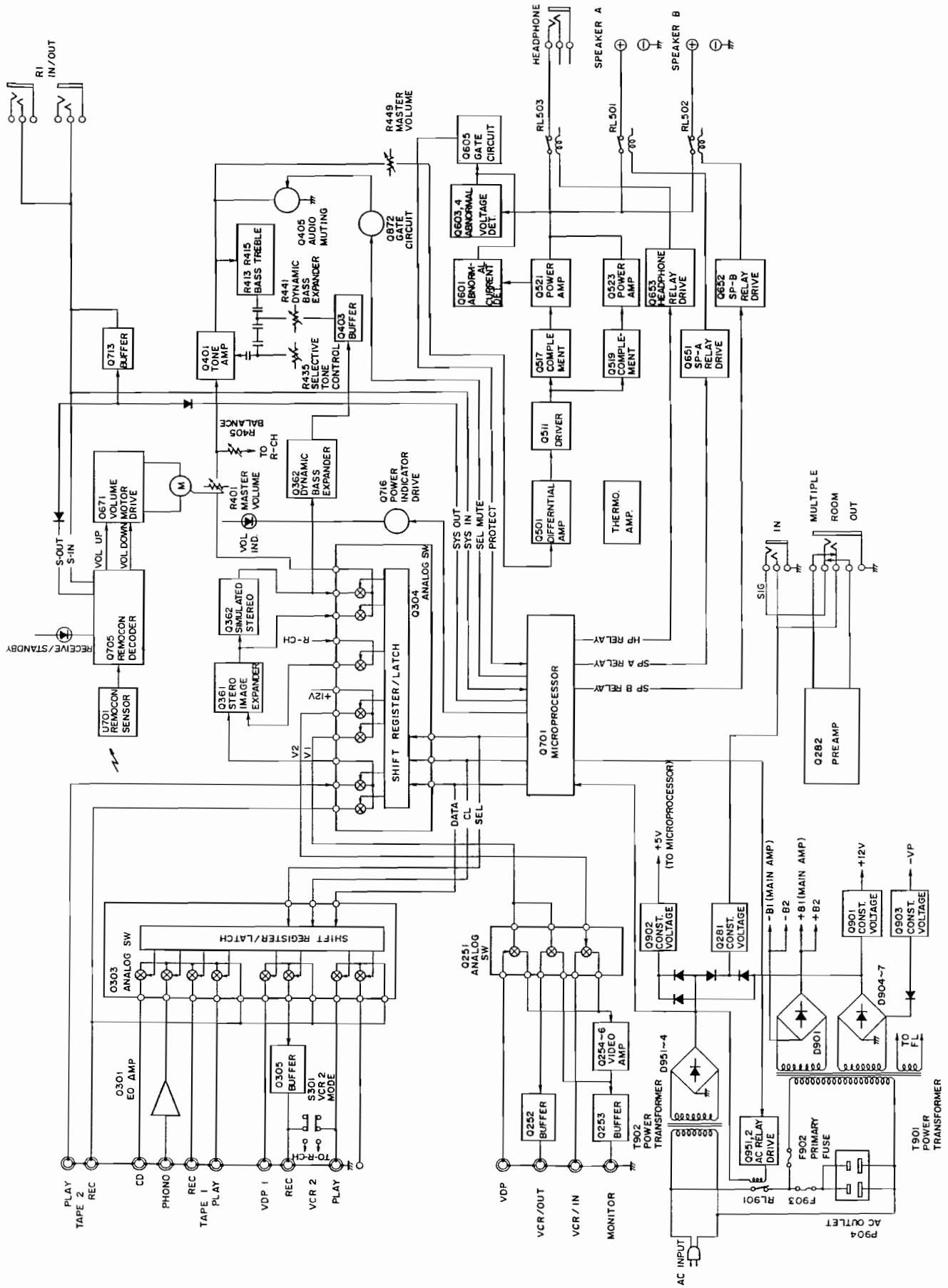
PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
A1	27100163-2	Chassis
A2	27121347-2A	Back panel
A3	27141391	Bracket LH
A4	27141392	Bracket RH
A5	27160257	Radiator
A7	27190644	Holder, dial plate
A11	28133244	Back plate
A12	28130260	Dial plate
A13	27300750	⚠ Strainrelief
A19	27190524	KGLS-14R, Holder
A20	834430088	3TTS+8B(BC), Self-tapping screw
A21	831130088	3TTW+8B, Self-tapping screw
A22	830440089	4TTC+8C(BC), Self-tapping screw
A23	834430108	3TTS+10B(BC), Self-tapping screw
A25	82142004	2P+4F(BC), Pan head screw
A26	833430080	3TTP+8P(BC), Self-tapping screw
A27	801433	3SMS10WSW+14B, Sems tapping screw
A30	27110560A	Front bracket ass'y
A31	28184394	Top cover
A32	834430088	3TTS+8B(BC), Self-tapping screw
A33	28140024	0.5t×10×390, Cushion
A51	1A216121	Front panel ass'y
A56	28191561A	Clear plate
A61	27175153-1	Leg
A62	834430088	3TTS+8B(BC), Self-tapping screw
A81	28323365C	Knob VOLUME
A82	28324034	Knob BALANCE
A83	28322925	Knob SLIDE
A91	870048	3 ×8 ×t0.8, Washer, nylon
A92	27270212	Spacer
F902	252075	2.5A-SE-EAK, Primary fuse
F903	252075	2.5A-SE-EAK, AC outlet fuse
P304	25060044	14×3mm, Terminal GROUND
P901	253149 or 253151	⚠ AS-CEE, Power supply cord
Q521, Q522	2201653, 2201654, 2201655, 2202272 or 2202273	2SC3856(O), 2SC3856(Y), 2SC3856(P), 2SC3907(R) or 2SC3907(O), Power amplifier transistors
Q523, Q524	2201663, 2201664, 2201665, 2202262 or 2202263	2SA1492(O), 2SA1492(Y), 2SA1492(P), 2SA1516(R) or 2SA1516(O), Power amplifier transistors
T901	2300304	⚠ NPT-992G, Power transformer
U1	1A215569-1A	NAAR-3869-1A, FM/AM tuner and selector circuit pc board ass'y
U2	1A215570-1A	NAAF-3870-1A, Power amplifier pc board ass'y
U3	1A215571-1A	NAETC-3871-1A, Speaker terminal pc board ass'y
U4	1A215572-1A	NAETC-3872-1A, Headphone terminal pc board ass'y
U5	1A215573-1A	NAETC-3873-1A, Video terminal pc board ass'y
U6	1A215574-1A	NADIS-3874-1A, Display pc board ass'y
U7	1A215575-1A	NAAF-3875-1A, Volume pc board ass'y
U8	1A215576-1A	NAAF-3876-1A, Preamplifier pc board ass'y
U9	1A215577-1	NADIS-3877-1, Volume indicator pc board ass'y
U10	1A215578-1A	NAPS-3878-1A, Power supply circuit pc board ass'y
U12	1A215580-1	NAETC-3880-1, AC outlet terminal pc board ass'y

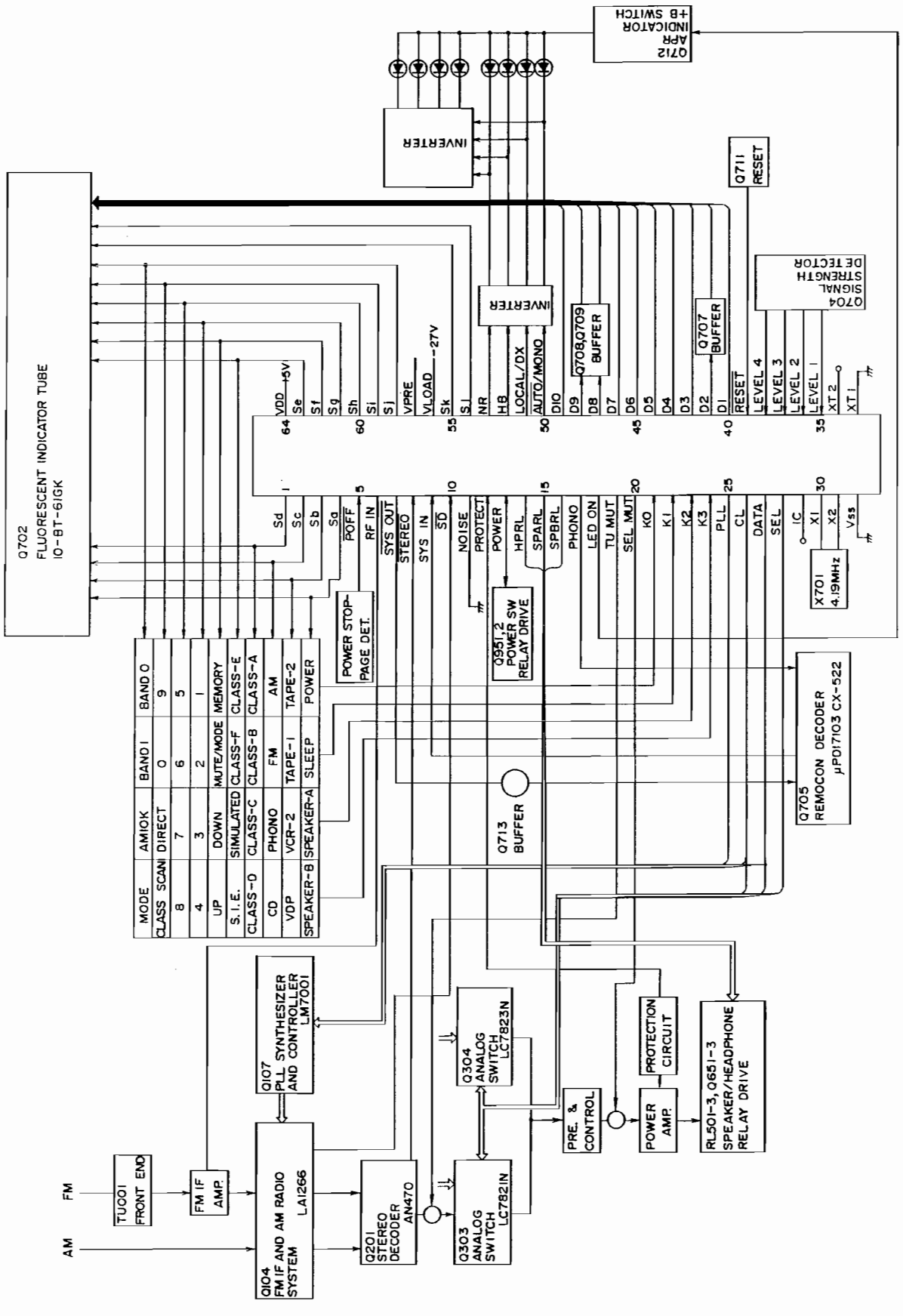
NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PARTS NUMBER SPECIFIED.

BLOCK DIAGRAM




RI IN/OUT
HEADPHONE
SPEAKER A
SPEAKER B
RL503
RL501
RL502
R449 MASTER VOLUME
Q605 GATE CIRCUIT
Q603,4 ABNORMAL VOLTAGE DET.
Q601 ABNORMAL CURRENT DET.
Q521 POWER AMP
Q523 POWER AMP
Q653 HEADPHONE RELAY DRIVE
Q652 SP-B RELAY DRIVE
Q651 SP-A RELAY DRIVE
Q872 GATE CIRCUIT
Q405 AUDIO MUTING
R413 R415 BASS TREBLE
R441 DYNAMIC BASS EXPANDER
R435 SELECTIVE TONE CONTROL
Q403 BUFFER
Q401 TONE AMP
Q713 BUFFER
R405 BALANCE
TO R-CH
Q362 DYNAMIC BASS EXPANDER
Q716 POWER INDICATOR DRIVE
Q517 COMPLEMENT
Q519 COMPLEMENT
Q511 DRIVER
Q501 DIFFERNTIAL AMP
THERMO. AMP.
Q671 VOLUME MOTOR DRIVE
R401 MASTER VOLUME
VOL IND.
VOL UP
VOL DOWN
S-OUT
S-IN
Q705 REMOCON DECODER
RECEIVE/STANDBY
U701 REMOCON SENSOR
Q362 SIMULATED STEREO
Q361 STEREO IMAGE EXPANDER
R-CH
+12V
V2
V1
Q304 ANALOG SW
SHIFT REGISTER/LATCH
SYS OUT
SYS IN
SEL MUTE
PROTECT
HP RELAY
SP A RELAY
SP B RELAY
Q701 MICROPROCESSOR
DATA
CL
SEL
SIG
IN
MULTIPLE ROOM OUT
Q282 PREAMP
+5V (TO MICROPROCESSOR)
Q902 CONST. VOLTAGE
Q281 CONST. VOLTAGE
-B1 (MAIN AMP)
-B2
+B1 (MAIN AMP)
+B2
Q901 CONST. VOLTAGE
+12V
Q903 CONST. VOLTAGE
-VP
D904~7
D901
TO FL
Q303 ANALOG SW
SHIFT REGISTER/LATCH
Q301 EQ AMP
Q305 BUFFER
S301 VCR 2 MODE
TO R-CH
Q251 ANALOG SW
Q254~6 VIDEO AMP
Q252 BUFFER
Q253 BUFFER
D951~4
T902 POWER TRANSFORMER
Q951,2 AC RELAY DRIVE
RL901
F902 PRIMARY FUSE
F903
P904 AC OUTLET
AC INPUT
T901 POWER TRANSFORMER
PLAY TAPE 2 REC
CD
PHONO
REC TAPE 1 PLAY
VDP 1
REC VCR 2 PLAY
VDP
VCR/OUT
VCR/IN
MONITOR

CONNECTION DIAGRAM OF MICROPROCESSOR



Q701 μPD75286CW-014 (MICROPROCESSOR)

<table>
<tr><th>Pin No.</th><th>Function</th><th>Description</th></tr>
<tr><td>1-4</td><td>Sd-Sa</td><td>Segment and key scan output terminals."H"when active.</td></tr>
<tr><td>5</td><td>$\overline{\text{POFF}}$</td><td>This is the input terminal for detection of the stoppage of electric current."L"when the stoppage of electric current.</td></tr>
<tr><td>6</td><td>RF IN</td><td>RF mode input terminal
Control the terminal LOCAL/DX as shown below.
<table>
<tr><th>RF IN</th><th>LOCAL/DX</th></tr>
<tr><td>L</td><td>L</td></tr>
<tr><td>H</td><td>H</td></tr>
</table></td></tr>
<tr><td>7</td><td>$\overline{\text{SYS OUT}}$
/SYS EN</td><td>System code output terminal."L"when active.
The initial setting input terminal when the power turns on.</td></tr>
<tr><td>8</td><td>$\overline{\text{STEREO}}$</td><td>Stereo broadcast detection input terminal."L"when stereo broadcast.
Control of STEREO indicator.</td></tr>
<tr><td>9</td><td>SYS IN</td><td>System code input terminal."H"when active.</td></tr>
<tr><td>10</td><td>$\overline{\text{SD}}$</td><td>Broadcast detection input terminal."L"when tuned.
Control the stop of the auto tuning and the output TU MUT.</td></tr>
<tr><td>11</td><td>NOISE</td><td>Noise detection input terminal. "H" when active.
Control the stop of the auto tuning.</td></tr>
<tr><td>12</td><td>PROTECT</td><td>Protect operation detection input terminal. "H"when active.</td></tr>
<tr><td>13</td><td>POWER</td><td>Relay control output terminal for power switch."H"when the power turns on.</td></tr>
<tr><td>14</td><td>HPRL</td><td>Relay control output terminal for headphone."H"when the relay turns on.</td></tr>
<tr><td>15</td><td>SPARL</td><td>Relay control output terminal for speaker A."H"when the relay turns on.</td></tr>
<tr><td>16</td><td>SPBRL</td><td>Relay control output terminal for speaker B."H"when the relay turns on.</td></tr>
<tr><td>17</td><td>PHONO</td><td>Phono control output terminal."L"when the selector switch is PHONO.</td></tr>
<tr><td>18</td><td>LED ON</td><td>APR indicator control output terminal. "L"when indicators light on.</td></tr>
<tr><td>19</td><td>TU MUT</td><td>Muting output terminal of tuner section. "H"when active.</td></tr>
<tr><td>20</td><td>SEL MUT</td><td>Muting output terminal when the selector switch operates."H"when active.</td></tr>
<tr><td>21-24</td><td>K0-K3</td><td>Key scan input terminals. "H"when active.</td></tr>
<tr><td>25</td><td>PLL</td><td>Output terminal to connect to the terminal CE of PLL IC(LM7001).</td></tr>
<tr><td>26</td><td>CL</td><td>Output terminal to connect to the terminal CL of function switches(LC7821N, LC7823N) and the terminal CL of PLL IC.</td></tr>
<tr><td>27</td><td>DATA</td><td>Output terminal to connect to the terminal DI of function switches(LC7821N, LC7823N) and the terminal DATA of PLL IC.</td></tr>
<tr><td>28</td><td>SEL</td><td>Output terminal to connect to the terminal CE of function switches.</td></tr>
<tr><td>29</td><td>IC</td><td>Internal connected</td></tr>
<tr><td>30</td><td>X1</td><td>Ceramic oscillator connection terminals for main system clock.</td></tr>
<tr><td>31</td><td>X2</td><td>Connect to the 4.19MHz ceramic oscillator.</td></tr>
<tr><td>32</td><td>GND</td><td>Ground terminal.</td></tr>
<tr><td>33</td><td>XT1</td><td>Crystal oscillator connection terminal for sub-system.</td></tr>
<tr><td>34</td><td>XT2</td><td>Not used.</td></tr>
<tr><td>35-38</td><td>LEVEL1-
LEVEL4</td><td>Signal strength level input terminal.
<table>
<tr><th></th><th></th><th colspan="4">Signal indicator</th><th colspan="2">Output</th></tr>
<tr><th></th><th>Input</th><th>1th</th><th>2nd</th><th>3th</th><th>4th</th><th>NR</th><th>HB</th></tr>
<tr><td>LEVEL 1</td><td>H</td><td>off</td><td>off</td><td>off</td><td>off</td><td>H</td><td>H</td></tr>
<tr><td>LEVEL 1</td><td>L</td><td>on</td><td>off</td><td>off</td><td>off</td><td>H</td><td>H</td></tr>
<tr><td>LEVEL 1/2</td><td>L</td><td>on</td><td>on</td><td>off</td><td>off</td><td>L</td><td>H</td></tr>
<tr><td>LEVEL 1-3</td><td>L</td><td>on</td><td>on</td><td>on</td><td>off</td><td>L</td><td>H</td></tr>
<tr><td>LEVEL 1-4</td><td>L</td><td>on</td><td>on</td><td>on</td><td>on</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>39</td><td>$\overline{\text{RESET}}$</td><td>Reset input terminal."L"when active.</td></tr>
<tr><td>40-49</td><td>D1-D10</td><td>Digit output terminals."H"when active.</td></tr>
</table>

50	$\overline{\text{AUTO}}$/MONO	AUTO/MONO indicator output terminal."L"when FM mode is AUTO and "H"when FM mode is MONO.
51	LOCAL/DX	LOCAL/DX indicator output terminal.Control according input RF IN when FM.
52	HB	Hi-blend control and indicator output terminal."H"when LEVEL4 is high and "L"when LEVEL4 is low.
53	NR	Noise reduction control and indicator output terminal."H"when LEVEL2 is high and "L"when LEVEL2 is low.
54,55	Sl,Sk	Segment output terminal."H"when active.
56	VLOAD	Pull down resistor connection terminal of FIP controller/driver.
57	VPRE	Power supply terminal for output buffer of FIP controller/driver.
58-63	Sj-Se	Segment and key scan signal output terminals."H"when active.
64	VDD	Power supply terminal.(+5V)

BAND1, BAND0 (FM band setting)

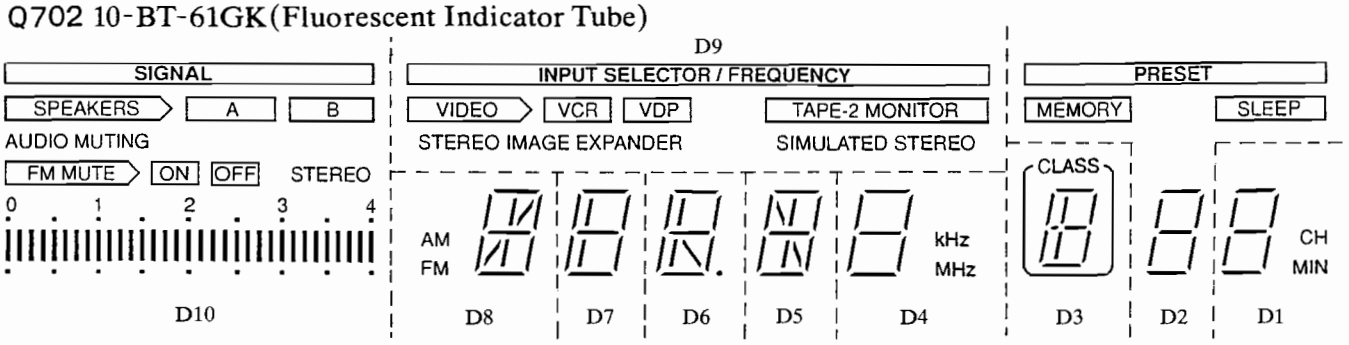
BAND1	BAND0	Region	Frequency range	Channel space	Reference frequency	IF frequency
0	1	Europer	87.50~108.00MHz	50kHz	25kHz	10.7MHz
0	0	U.S.A.	87.9 ~107.9 MHz	200kHz	25kHz	10.7MHz
1	X	Saudi Arabia	87.50~108.00MHz	50kHz	25kHz	10.7MHz

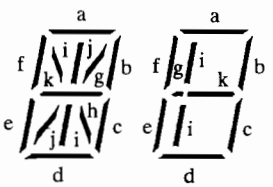
X:Don't care

AM10K

AM10K	Region	Frequency range	Channel space	Reference frequency	IF frequency
0	Europer	522~1611kHz	9kHz	9kHz	450kHz
1	U.S.A.	530~1710kHz	10kHz	10kHz	450kHz
0	Saudi Arabia	531~1602kHz	9kHz	9kHz	450kHz

Q702 10-BT-61GK(Fluorescent Indicator Tube)

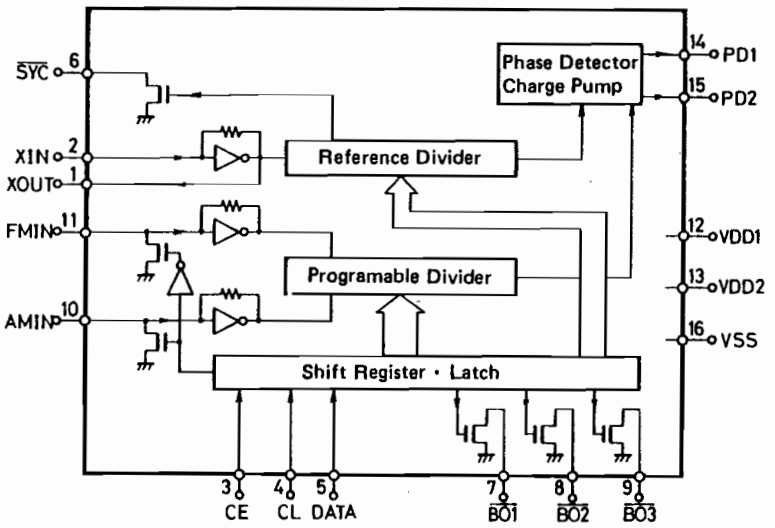




	D10	D9	D8	D7	D6	D5	D4	D3	D2	D1
Sa	A	VIDEO	a	a	a	a	a	a	a	a
Sb	B	VCR	b	b	b	b	b	b	b	b
Sc	AUDIO MUT	VDP	c	c	c	c	c	c	c	c
Sd	STEREO	TAPE-2MONI	d	d	d	d	d	d	d	d
Se	II(LEVEL1)	SIMULATED	e	e	e	e	e	e	e	e
Sf	II(LEVEL2)	STEREO IM.	f	f	f	f	f	f	f	f
Sg	II(LEVEL3)		g	g	g	g	g	g	g	g
Sh	II(LEVEL4)				h	h				
Si	FM MUTE		i	i	i	i		i		
Sj	ON		j						MEMORY	
Sk	OFF		AM				kHz	k	SLEEP	CH
Sl	SIGNAL	INPUT SEL.	FM				MHz	CLASS	PRESET	MIN

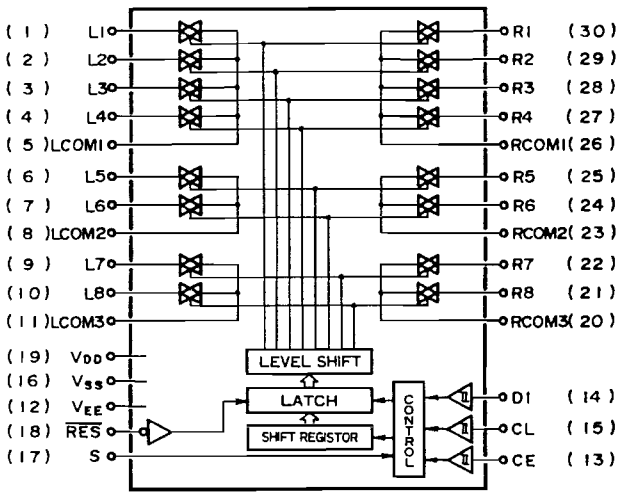
BLOCK DIAGRAMS OF IC

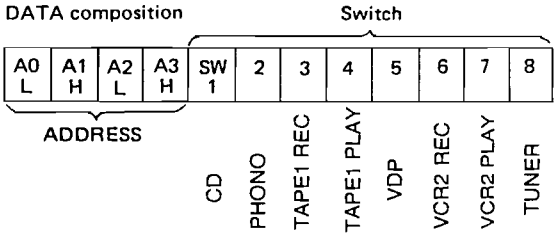
Q107 LM7001 (PLL SYNTHESIZER AND CONTROLLER)



Pin No.	Terminal	Description
1	XOUT	Connect to the 7.2 MHz crystal oscillator.
2	XIN	
3	CE	Chip enable terminal. Connect to the PLL terminal of microporcessor μPD75286CW-014.
4	CL	Serial clock input terminal. Connect to the CLOCK terminal of microporcessor μPD75286CW-014.
5	DATA	Serial data input terminal. Connect to the DATA terminal of microporcessor μPD75286CW-014.
6	$\overline{SYN}$	Not used.
7	$\overline{BO1}$	Auto/Mono control output terminal. "L" when Auto.
8	$\overline{BO2}$	FM control signal output terminal. "L" when FM.
9	$\overline{BO3}$	AM control signal output terminal. "L" when AM.
10	AMIN	AM local oscillator input terminal.
11	FMIN	FM local oscillator terminal.
12	$V_{DD}1$	Power supply terminal for back-up.
13	$V_{DD}2$	Power supply terminal.
14	PD1	Charge pump output of the phase detector which constitutes the PLL. High level is output when the divided local oscillator frequency is high than the reference frequency. In the opposite case, low level is output. Floating occurs when the frequencies matched. The output is applied to the variable capacitor diode in the local oscillator through the low pass filters.
15	PD2	
16	Vss	Ground terminal.

Q303 LC7821N (Analog switch)



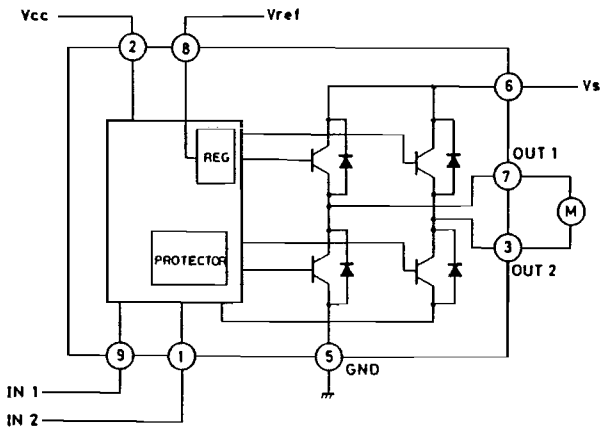


The source becomes ON when the bit of switch becomes high.

Pin No.	Terminal	Description
1	CD	Input/output terminals of audio signal of left channel. Control to the inside analog switch at the serial data.
2	PHONO	
3	TAPE 1 REC	
4	TAPE 1 PLAY	
5	L COM 1	
6	VDP	
7	VCR 2 REC	
8	L COM 2	
9	VCR 2 PLAY	
10	TUNER	
11	L COM 3	
12	Vss	Negative power supply terminal. (−15V)
13	CE	Chip enable terminal. Connect to SEL terminal of microporcessor.
14	D1	Serial data input terminal. Connect to DATA terminal of microporcessor.
15	CL	Serial clock input terminal. Connect to CLOCK terminal of microprocessor.

Pin No.	Terminal	Description
16	Vss	Ground terminal.
17	S	Selector terminal.
18	RES	Reset terminal. When power is turned ON, the condition of the analog switch is not determined, but when this terminal is "L", all analog switches are OFF.
19	VDD	Power supply terminal. (+15V)
20	R COM 3	Input/output terminals of audio signal of right channel. Control to the inside analog switch at the serial data.
21	TUNER	
22	VCR 2 PLAY	
23	R COM 2	
24	VCR 2 REC	
25	VDP	
26	R COM 1	
27	TAPE1 PLAY	
28	TAPE1 REC	
29	PHONO	
30	CD	

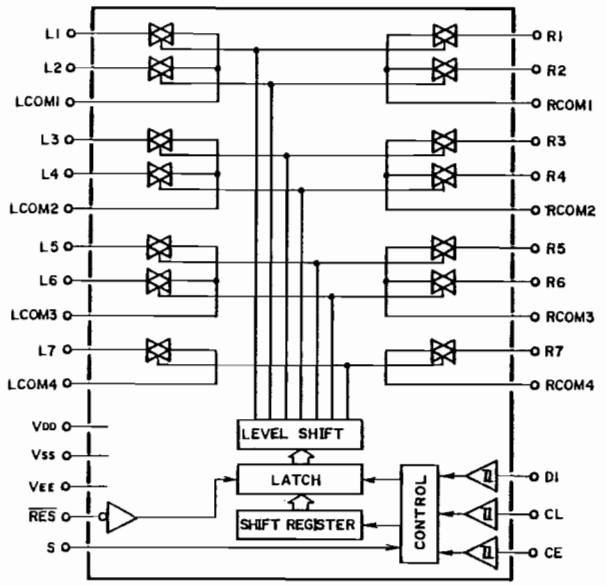
Q871 TA7291S (Volume Motor Drive)

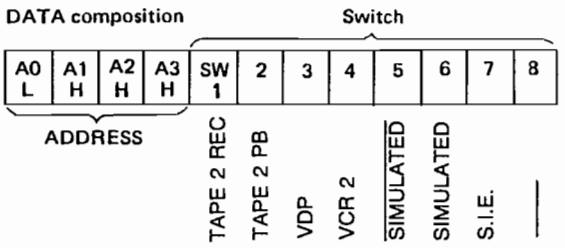


INPUT		OUTPUT		MODE
IN 1	IN 2	OUT 1	OUT 2	
0	0	∞	∞	STOP
1	0	H	L	CW/CCW
0	1	L	H	CCW/CW
1	1	L	L	BRAKE

CCW: Counter clockwise direction
CW: Clockwise direction

Q304 LC7823N (ANALOG SWITCH)





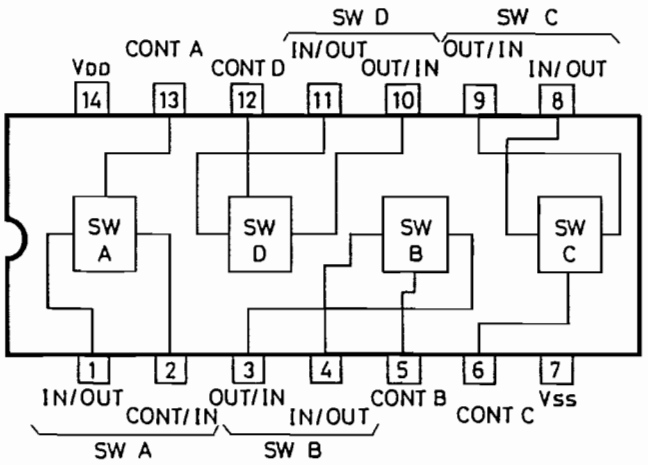
The source becomes ON when the bit of switch becomes high.

S.I.E.=Stereo Image Expander

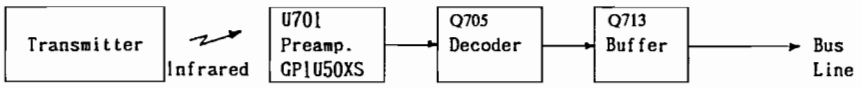
Pin No.	Terminal	Description
1 (L1)	TAPE 2 REC	Input/output terminals of audio signal of left channel. Control to the inside analog switch at the serial data.
2 (L2)	TAPE 2 PB	
3	L COM 1	
4 (L3)	VDP	
5 (L4)	VCR 2	
6	L COM 2	
7 (L5)	$\overline{\text{SIMULATED}}$	
8 (L6)	SIMULATED	
9	L COM 3	
10 (L7)	S.I.E.	
11	L COM 4	
12	V_{EE}	Negative power supply terminal. (−15V)
13	CE	Chip enable terminal. Connect to SEL terminal of microprocessor.
14	DI	Serial data input terminal. Connect to DATA terminal of microporcessor.
15	CL	Serial clock input terminal. Connect to CLOCK terminal of microporcessor.

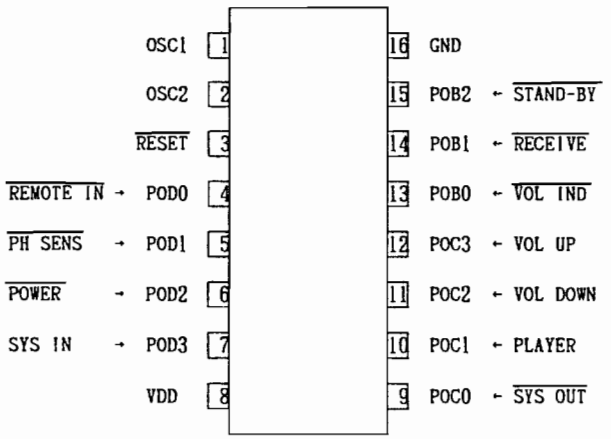
Pin No.	Terminal	Description
16	Vss	Ground terminal.
17	S	Selector terminal.
18	RES	Reset terminal. When power is turned ON, the condition of the analog switch is not determined, but when this terminal is "L", all analog switches are OFF.
19	V_{DD}	Power supply terminal. (+15V)
20	R COM 4	Input/output terminals of audio signal of right channel. Control to the inside analog switch at the serial data.
21 (R7)	S.I.E.	
22	R COM 3	
23 (R6)	SIMULATED	
24 (R5)	$\overline{\text{SIMULATED}}$	
25	R COM 2	
26 (R4)	VCR 2	
27 (R3)	VDP	
28	R COM 1	
29 (R2)	TAPE 2 PB	
30 (R1)	TAPE 2 REC	

Q251 4066B (ANALOG SWITCH)



Q705 μPD17103CX-51 (Remote Control Transmitter Decoder)

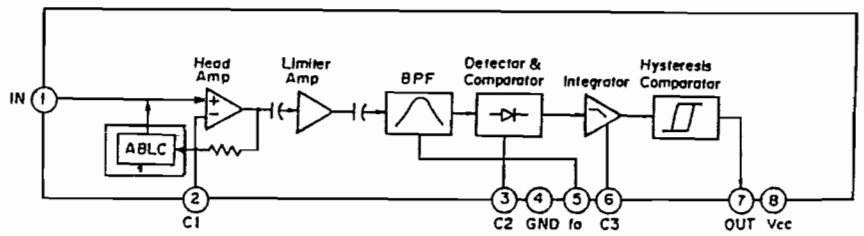




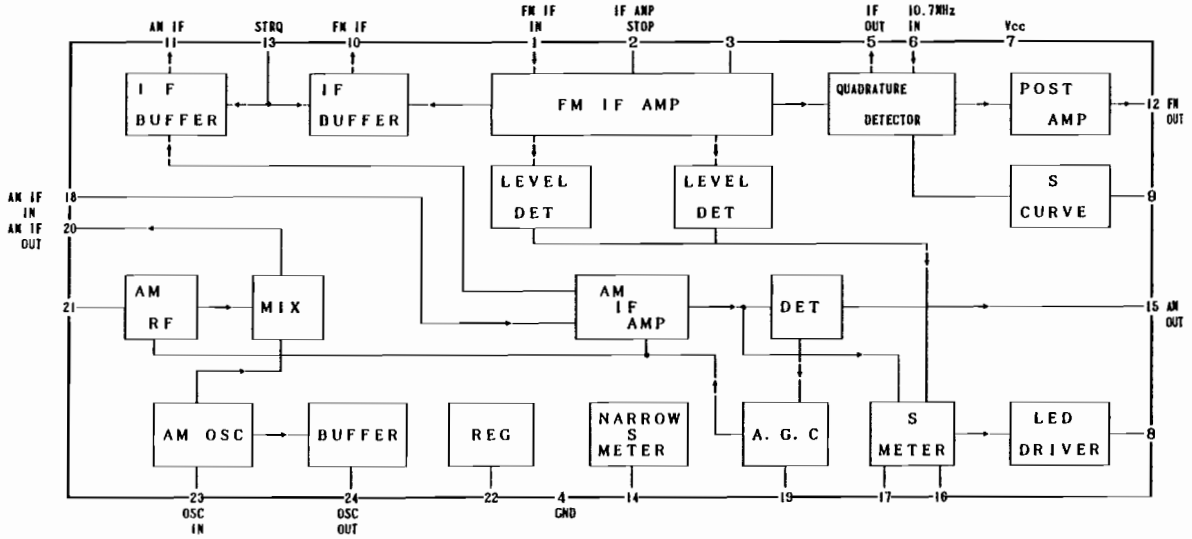
Pin No.	Symbol	Terminal	Description
1	OSC1	OSC	Connect to the 8.00MHz ceramic oscillator.
2	OSC2		
3	RES	$\overline{\text{RESET}}$	System reset terminal. Active low.
4	POD0	$\overline{\text{REMOTE IN}}$	Signal input terminal from preamp. for remote control. Active low.
5	POD1	PHONO SENES	Phono detection input terminal. Active low.
6	POD2	POWER	Stand-by detection input terminal. During low input, only the POWER code is decoded.
7	POD3	SYS IN	System code input terminal.
8	V_{DD}	+B	Power supply terminal.
9	POC0	$\overline{\text{SYS OUT}}$	Output at this terminal are the custom code (16bits) remote control code input to REMOTE IN, data code (8bits), and the serial code (12bits) that has been converted corresponding to the decoded data code (8bits)
10	POC1	PLAYER	When the player PLAY/REEJECT is input, a high pulse of 200ms is output.
11	POC2	VOL DOWN	When the volume DOWN code is input, a high pulse of 120ms is output.
12	POC3	VOL UP	When the volume UP code is input, a high pulse of 120ms is output.
13	POB0	$\overline{\text{VOL IND}}$	During the output of VOLUME UP/DOWN, a pulse (⌋T⌊T⌋T⌊T⌊= 250ms) is output. (Not used.)
14	POB1	$\overline{\text{RECEIVE}}$	This is the display output for remote control reception. Output is low when decoded code is being recieved.
15	POB2	$\overline{\text{STAND-BY}}$	STAND-BY indication terminal.
16	V_{SS}	GND	Ground terminal.

Q282 XC20106A (REMOTE CONTROL PREAMPLIFIER)

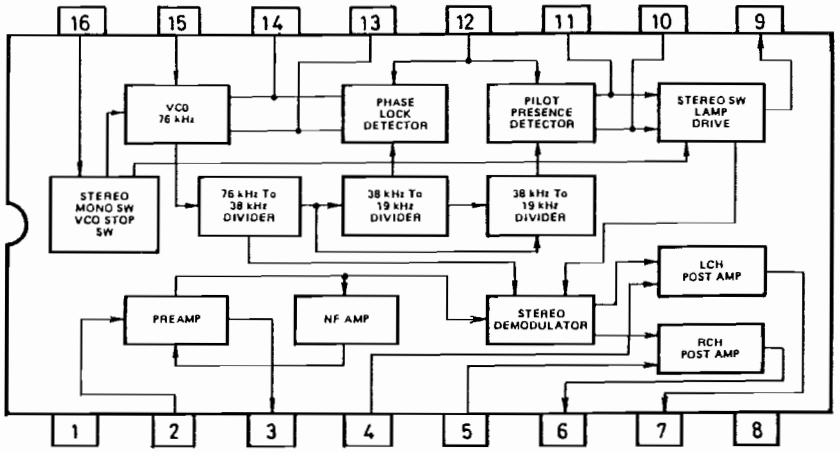
1. IN: Input terminal
2. C1: Frequency response and gain setting terminal of head amplifier
3. C2: Connect to the capacitor for detector
4. GND: Ground terminal
5. fo: Center frquency setting terminal of BPF
6. C3: Connect to the capacitor for integrator
7. OUT: Output terminal
8. V_{CC}: Power supply terminal



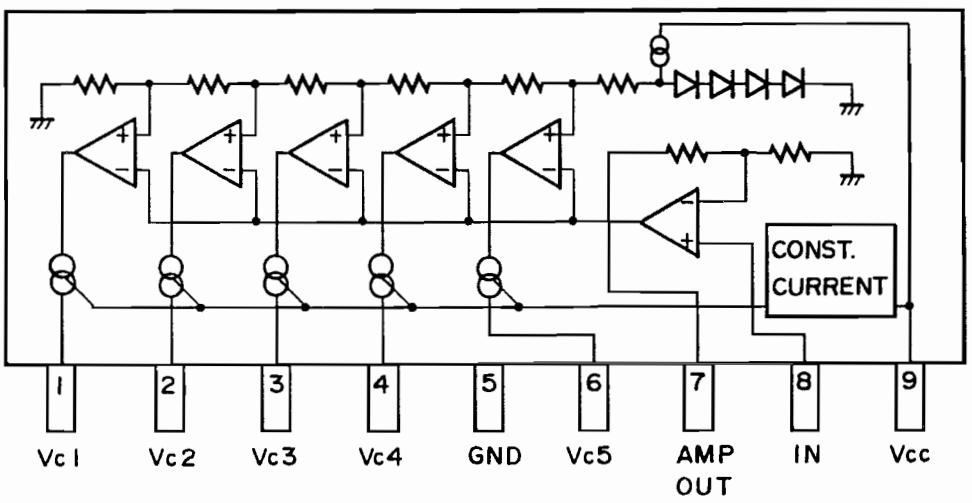
Q104 LA1266 (FM IF and AM Radio System)



Q201 AN7470 (FM Stereo Decoder)



Q704 BA6125 (Signal Strength Detector)



ADJUSTMENT PROCEDURES

Preparation

- **Input**

FM mono: 1kHz, 75kHz devi., 60dB/μV
FM stereo: 1kHz, L+R 67.5kHz devi.: Pilot signal 19kHz 7.5kHz devi.
AM: 400Hz, 30% mod.,

- **Output**

Connect the non-inductive type resistor of 8 ohms to the speaker terminal A of left and right channels unless otherwise noted.

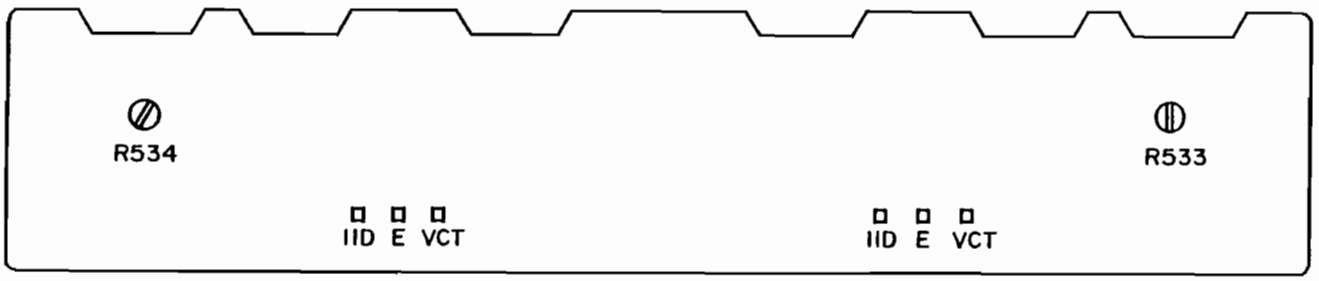
- **Standard knob position**

TAPE MONITOR ..... SOURCE
VOLUME ..... Maximum
BASS/TREBLE/BALANCE ..... Center
VCR 2 MODE ..... STEREO
SPEAKER ..... A
SIMULATED STEREO ..... OFF
DYNAMIC BASS EXPANDER ..... OFF
STEREO IMAGE EXPANDER ..... OFF
SELECTIVE TONE CONTROL ..... OFF

Amplifier section

1. Idling current adjustment

Connect the DC voltmeter to the terminals I_{ID} and V_{CT} on the power amplifier pc board.
Adjust the semi-fixed resistors R533 and R534 so that the indication of voltmeter is 7.5 ± 1.5mV.
Notes: VOLUME ..... Maximum, Open load, No input
Adjust after switching on for 5 minutes.



FM section

Item	Step	Connection of instrument	FM SG output	Stereo modulator output	Turning dial setting	Output indicator	Adjustment	Adjust for	Remarks
FM IF	1	Fig. 1	99.1MHz 1kHz, 75kHz devi. 65dBf (60dB)	–	99.1MHz	DC voltmeter	L101	0V ± 20mV	Mode switch: MONO Repeat the steps 1 and 2 until no further adjustment is necessary
	2					Distortion analyzer	L102	Minimum	
VCO		Fig. 2	99.1MHz 1kHz, 75kHz devi. 65dBf (60dB)	–	99.1MHz	Frequency counter	R201	19kHz ± 10Hz	
Stereo Distortion		Fig. 3	99.1MHz 65dBf (60dB) Ext. modulation	L or Rch. 1kHz	99.1MHz	Distortion analyzer	IF on the front end	Minimum	Mode switch: STEREO Don't turn more than ±180°
Stereo Separation	1	Fig. 3	99.1MHz 65dBf (60dB) Ext. modulation	Lch. 1kHz	99.1MHz	Rch. AC voltmeter	R202	Minimum	Maximum and same separation
	2			Rch. 1kHz		Lch. AC voltmeter		Minimum	
Muting level		Fig. 3	99.1MHz 17.2dBf (12dB) 1kHz, 75kHz devi.	–	99.1MHz	AUTO indicator	R101	Light on	
Signal level		Fig. 3	99.1MHz 35.2dBf (30dB) 1kHz 75kHz devi.	–	99.1MHz	4th indicator of signal strength	R102	Light on	

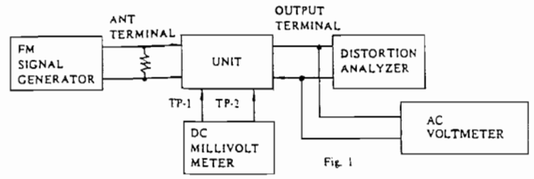
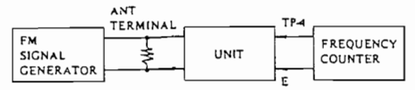


Fig. 1



Use the high impedance probe. (10:1)

Fig. 2

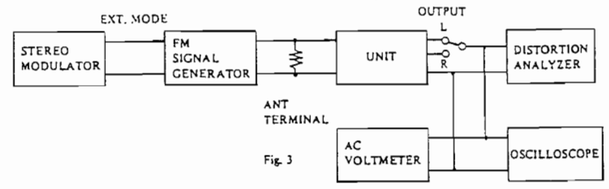
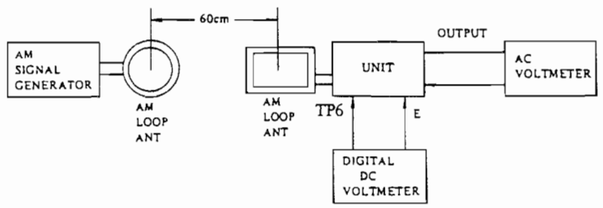


Fig. 3

AM section

Step	AM SG output	Tuned frequency	Output indicator	Adjustment point	Adjust for
1		522kHz	Digital DC voltmeter	OSC on RF block L151	1.3V ± 0.1V
2	603kHz 400Hz 30% mod. 60dB/m	603kHz	AC voltmeter	RF on RF block L151	Maximum
3	999kHz 400Hz 30% mod. 60dB/m	999kHz	AC voltmeter	L152	Maximum

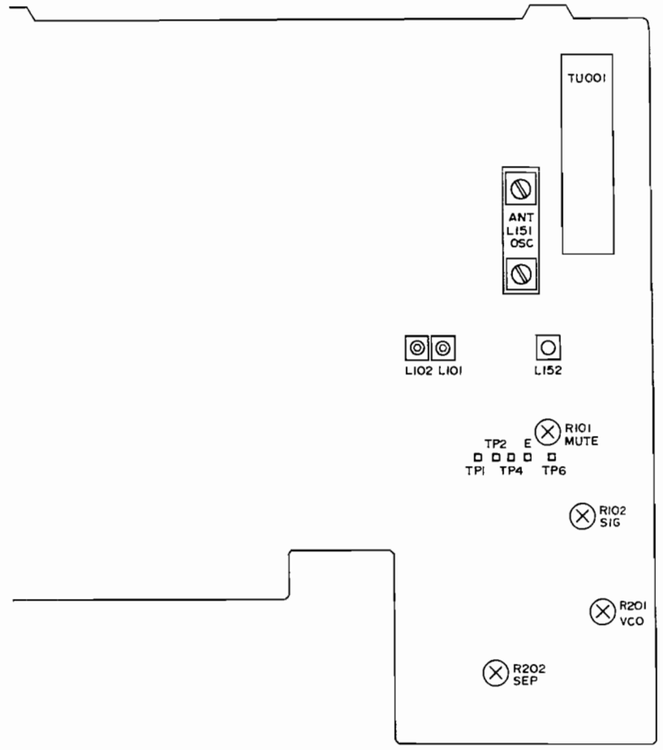


Reference specifications

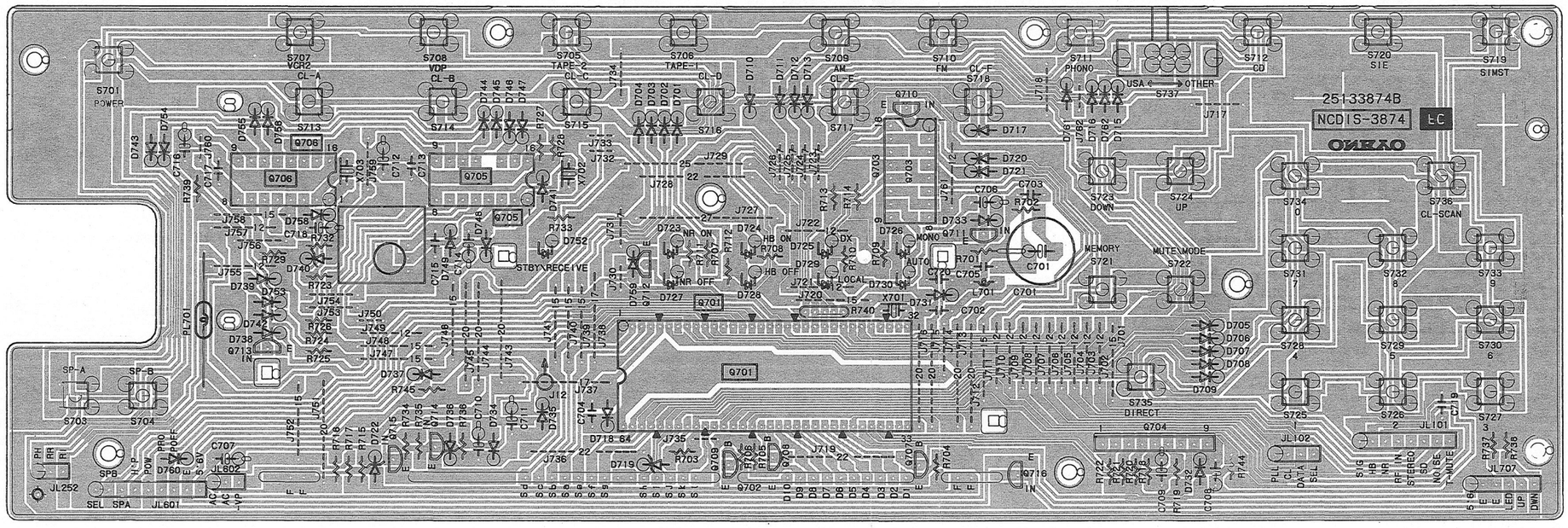
FM Tuned voltage
87.5MHz 1.6 ± 0.5V
108.0MHz 7.9 ± 0.5V

Auto stop level
AM: Less than 66dB/m
FM: Less than 19dBμ

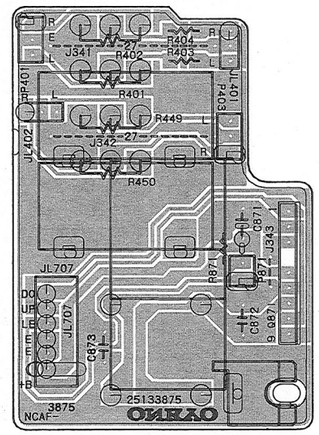
AM Tuned voltage
522kHz 1.2 ± 0.5V
1611kHz 7.0 ± 0.5V



PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE



DISPLAY PC BOARD



VOLUME PC BOARD

PRINTED CIRCUIT BOARD PARTS LIST

DISPLAY PC BOARD(NADIS-3874-1A)

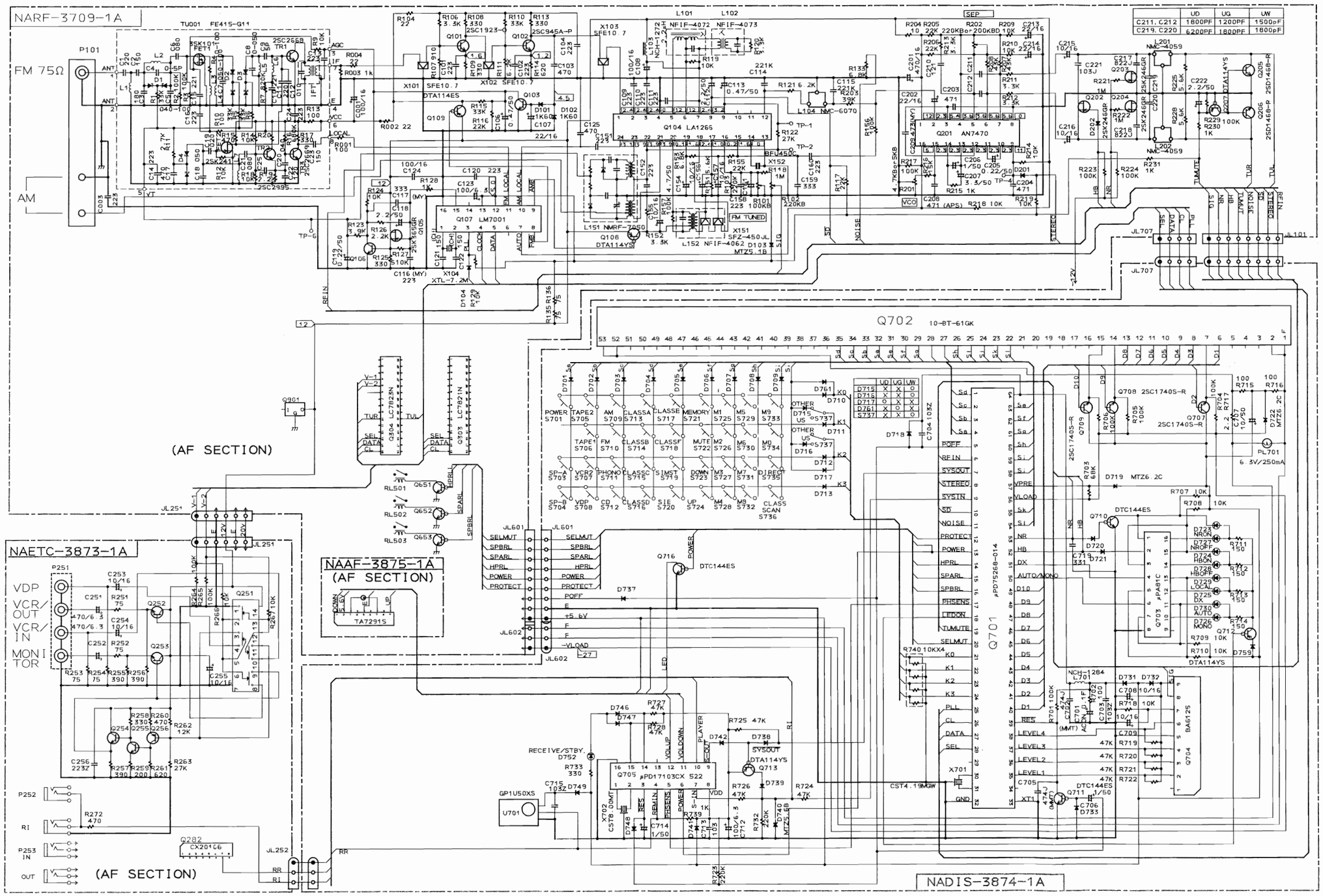
CIRCUIT NO.	PART NO.	DESCRIPTION
	Remocon sensor	
U701	24130003	GP1U50XS
	ICs	
Q701	22240337	μPD75286CW-014
Q703	222807	μPA81C
Q704	22240341	BA6125
Q705	22240338	μPD17103CX-522
	FL tube	
Q702	212083	10-BT-61GK
	Transistors	
Q707-Q709	2213284	2SC1740S-R
Q710, Q711	221282	DTC144ES
Q712	2213710	DTA123JS
Q713	2213510	DTA114ES
Q716	221282	DTC144ES
	Lamp	
PL701	210064B	250mA, 6.3V
	Diodes	
D701-D713	223163	1SS133
D718	223163	1SS133
D719	224450623	MTZ6.2C
D720, D721	223163	1SS133
D722	224450623	MTZ6.2C
D731-D733	223163	1SS133
D737-D739	223163	1SS133
D740	224450562	MTZ5.6B
D741, D742	223163	1SS133
D746-D749	223163	1SS133
D759, D760	223163	1SS133
D761	223163	1SS133
	L.E.Ds	
D723-D726	225142	SEL2913K
D727-D730	225137CG,	SEL2413E-CG
	225137DG or	SEL2413E-DG or
	225137DY	SEL2413E-DY
D752	225141	SEL2213C
	Coil	
L701	233409K220	NCH-1284
	Ceraic oscillators	
X701	3010163	CST4.19MGW
X702	3010154	CST8.00MT
	Capacitors	
C701	3000057	0.1F, 5.5V, Super
C702, C705	375524744	0.47μF ±5%, 50V, MMT
C706	353780109	1 μF, 50V, Elect.
C707	353781009	10μF, 50V, Elect.
C708, C709	353741009	10μF, 16V, Elect.
C712	353721019	100 μF, 6.3V, Elect.
C714	353780109	1 μF, 50V, Elect.
	Resistor	
R740	49163103404	10k ×4, 1/10W, Network
	Switches	
S701	25035548	NPS-111-S510, Push
S703-S736	25035548	NPS-111-S510, Push
	Holder	
	27190768	L.E.D

VOLUME PC BOARD(NAAF-3875-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q871	22240239	TA7291S, IC
C871	354721019	100 μF, 6.3V, Elect. capacitor
R401, R402	5144009C	N16RGM50KA50KB30F,
R449, R450		Variable resistor
P401	2000809	NSAS-6P765, Socket
P403	2000624	NSAS-6P580, Socket
P871	2000635A	NSAS-4P591, Socket
	27141059	Bracket, ground

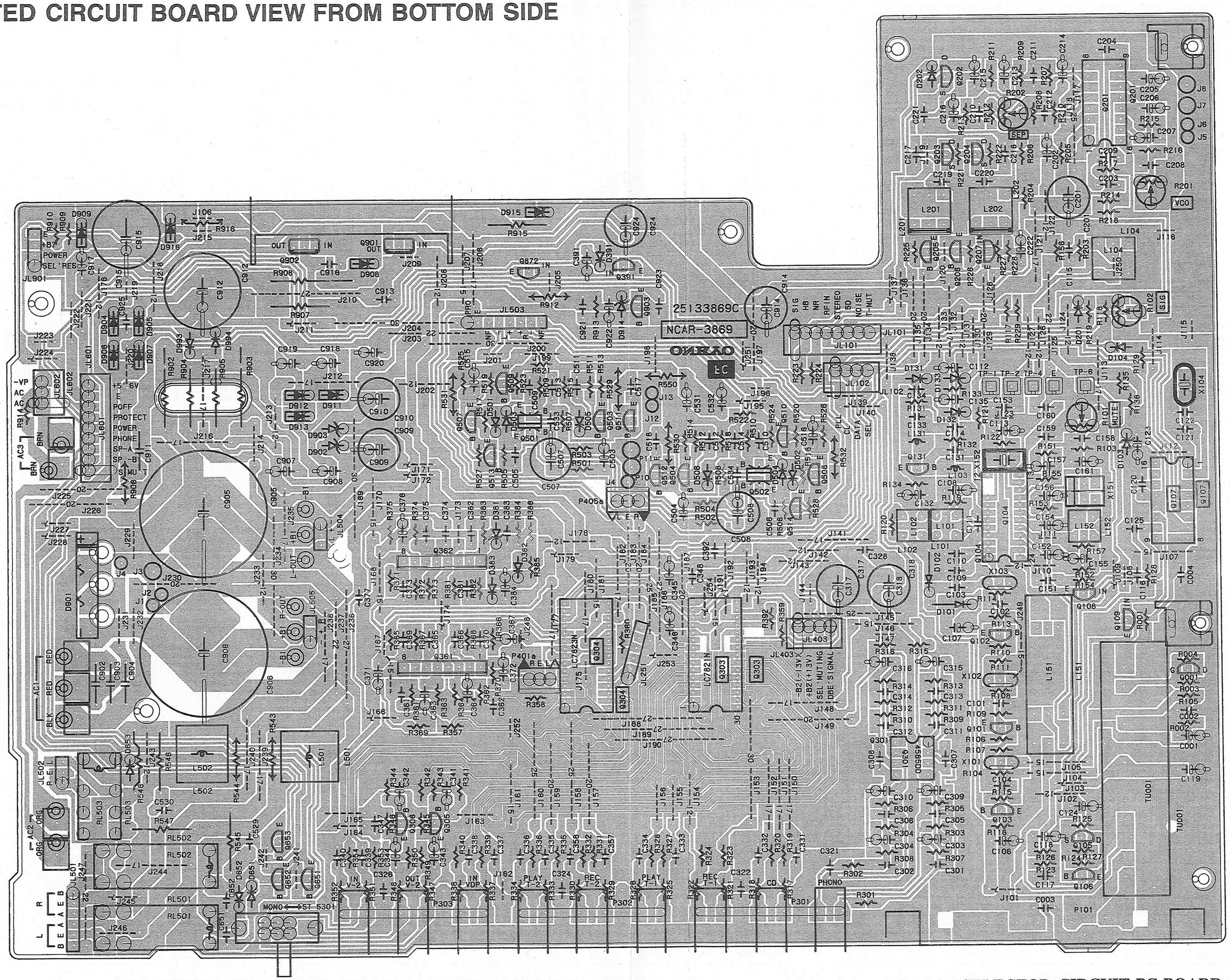
SCHEMATIC DIAGRAM

– TUNER SECTION –



	UD	UG	UW
C211, C212	1800PF	1200PF	1500pF
C219, C220	6200PF	1800PF	1800pF

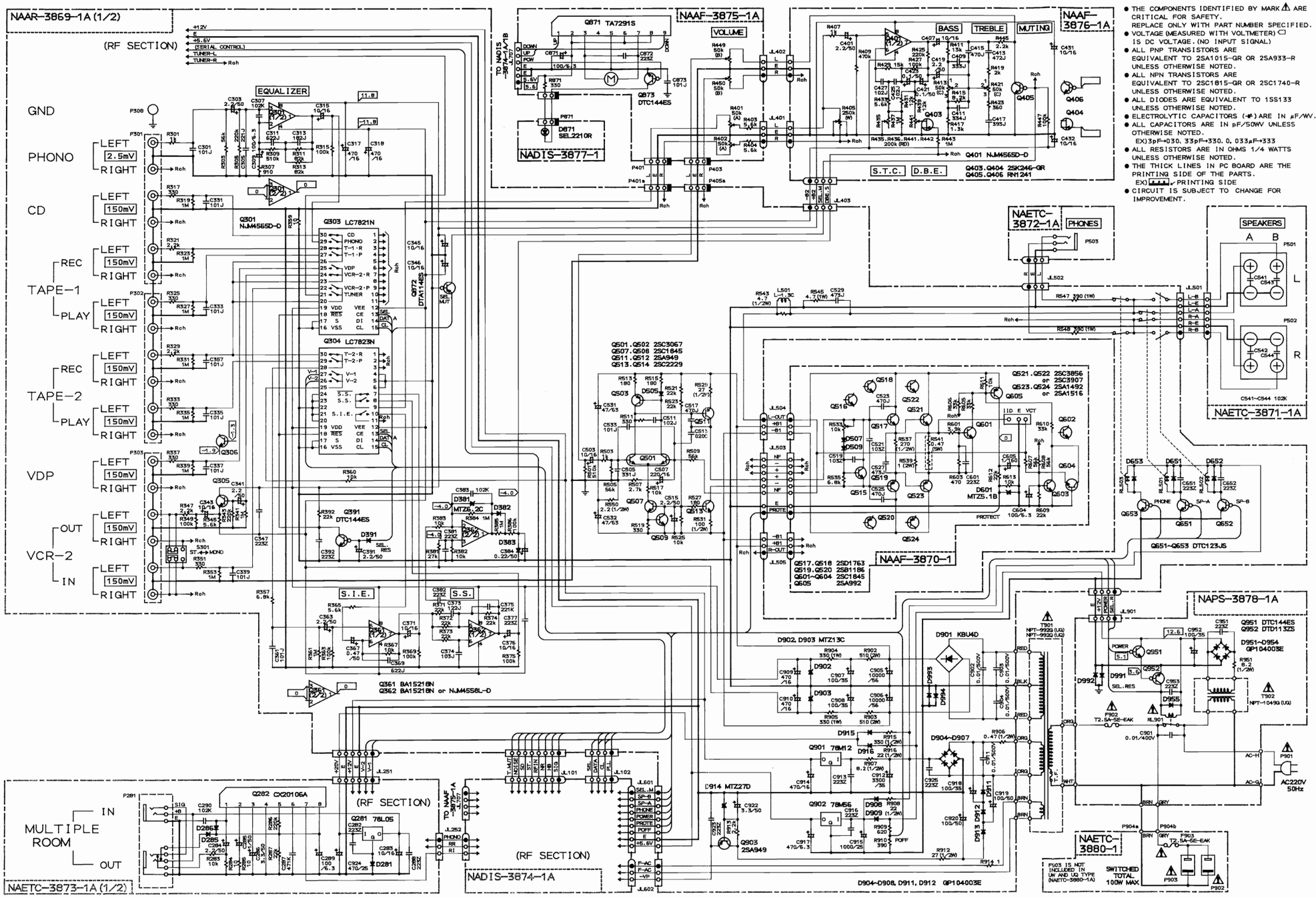
PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE



FM/AM TUNER AND SELECTOR CIRCUIT PC BOARD

SCHEMATIC DIAGRAM

– AMPLIFIER SECTION –



NOTE

- THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR SAFETY. REPLACE ONLY WITH PART NUMBER SPECIFIED.
- VOLTAGE (MEASURED WITH VOLTMETER) ▭ IS DC VOLTAGE. (NO INPUT SIGNAL)
- ALL PNP TRANSISTORS ARE EQUIVALENT TO 2SA1015-GR OR 2SA933-R UNLESS OTHERWISE NOTED.
- ALL NPN TRANSISTORS ARE EQUIVALENT TO 2SC1815-GR OR 2SC1740-R UNLESS OTHERWISE NOTED.
- ALL DIODES ARE EQUIVALENT TO 1SS133 UNLESS OTHERWISE NOTED.
- ELECTROLYTIC CAPACITORS (-#) ARE IN μF/WV.
- ALL CAPACITORS ARE IN pF/50WV UNLESS OTHERWISE NOTED. EX) 3pF→030, 33pF→330, 0.033μF→333
- ALL RESISTORS ARE IN OHMS 1/4 WATTS UNLESS OTHERWISE NOTED.
- THE THICK LINES IN PC BOARD ARE THE PRINTING SIDE OF THE PARTS. EX) ▬▬ PRINTING SIDE
- CIRCUIT IS SUBJECT TO CHANGE FOR IMPROVEMENT.

PRINTED CIRCUIT BOARD PARTS LIST

FM/AM TUNER AND SELECTOR CIRCUIT PC BOARD (NAAR-3869-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Front end	
TU001	240089	FE415-G11
	ICs	
Q104	22240039	LA1266
Q107	22240090	LM7001
Q201	22240242	AN7470
Q301	22240191	NJM4565D-D
Q303	22240280	LC7821N
Q304	22240339	LC7823N
Q361	22240247	BA15218N
Q362	22240247 or	BA15218N or
	22240293	NJM4558L-D
Q901	222780122NEC	78M12
Q902	222780565JRC	78M56
	Transistors	
Q101	2211723	2SC1923-O
Q102	2210746	2SC945A-P
Q103, Q106	2211183 or	2SC1740-R or
	2211255	2SC1815-GR
Q105	2212445	2SK365-GR
Q108, Q109	2213510	DTA114ES
Q202-Q204	2211945	2SK246-GR
Q205, Q206	2212794	2SD1468-R
Q207	2213510	DTA114ES
Q305, Q306	2211183 or	2SC1740-R or
	2211255	2SC1815-GR
Q391	221282	DTC144ES
Q501, Q502	2213676 or	2SC3067-F or
	2213677	2SC3067-G
Q503, Q504	2213074 or	2SA933-R or
	2211455	2SA1015-GR
Q507, Q508	2211732 or	2SC1845-F or
	2211733	2SC1845-E
Q509, Q510	2211183 or	2SC1740-R or
	2211255	2SC1815-GR
Q511, Q512	2211353 or	2SA949-O or
	2211354	2SA949-Y
Q513, Q514	2211633 or	2SC2229-O or
	2211634	2SC2229-Y
Q651-Q653	2213640	DTC123JS
Q872	2213510	DTA114ES
Q903	2211353 or	2SA949-O or
	2211354	2SA949-Y
	Diodes	
D101, D102	223132	1K60
D103	224450512	MTZ5.1B
D104	223163	1SS133
D201, D202	223163	1SS133
D381	224450623	MTZ6.2C
D382, D383	223163	1SS133
D391	223163	1SS133
D505, D506	223163	1SS133
D651-D653	223163	1SS133
D901	22380024	KBU4D
D902, D903	224451303	MTZ13C
D904-D908	22380035	GP104003E
D909, D913	223163	1SS133
D911, D912	22380035	GP104003E
D914	224452704	MTZ27D
D915, D916	223163	1SS133
D993, D994	223163	1SS133
	Transformers	
L101	233401	NFIF-4072
L102	233402	NFIF-4073
L104	233383	NMC-6070
L152	232139	NMIF-4062
	Coils	
L103	233409M022	NCH-1272
L201, L202	233355A	NMC-4059
L501, L502	231176	S-1.3C
	RF block	
L151	232148	NMRF-7050
	Ceramic filters	
X101-X103	3010137	SFE10.7MMK
X151	3010123	SFZ-450JL
X152	3010076	BFU-450C
	X'tal	
X104	3010141	XTL-7.2M
	Capacitors	
C001, C108	354741019	100 μF, 16V, Elect.
C106	354784799	0.47μF, 50V, Elect.
C107	354742209	22μF, 16V, Elect.
C112	391980227	2.2 μF, 50V, Elect.(RA2)
C113	354784799	0.47μF, 50V, Elect.
C116	371122234	0.022 μF ±5%, 50V, Mylar
C117	371123334	0.033 μF ±5%, 50V, Mylar
C118	391980227	2.2 μF, 50V, Elect.(RA2)
C119	354782299	0.22μF, 50V, Elect.
C123	391921017	100 μF, 6.3V, Elect.(RA2)
C124	354741019	100 μF, 16V, Elect.
C154	354780479	4.7 μF, 50V, Elect.
C155-C157	391941007	10μF, 16V, Elect.(RA2)
C159	371123334	0.033 μF ±5%, 50V, Mylar
C160	371122234	0.022 μF ±5%, 50V, Mylar
C201	354744719	470 μF, 16V, Elect.
C202	354742209	22μF, 16V, Elect.
C205	354782299	0.22μF, 50V, Elect.
C206	354780109	1 μF, 50V, Elect.
C207	354780339	3.3 μF, 50V, Elect.
C208	370134714	470pF ±5%, 100V, APS
C209	374724734	0.047 μF ±5%, 50V, Plastic(TF)
C211, C212	374721224	1200pF±5%, 50V, Plastic(TF)
C213, C214	354742209	22μF, 16V, Elect.
C215, C216	391941007	10μF, 16V, Elect.(RA2)
C217, C218	371128224	8200pF±5%, 50V, Mylar
C219, C220	374721824	1800pF±5%, 50V, Plastic(TF)
C221	374721034	0.01μF ±5%, 50V, Plastic(TF)
C222	391980227	2.2 μF, 50V, Elect.(RA2)
C303, C304	391980227	2.2 μF, 50V, Elect.(RA2)
C305, C306	373302214	220pF ±5%, 125V, PP
C307, C308	373301024	1000pF±5%, 125V, PP
C309, C310	391921017	100 μF, 6.3V, Elect.(RA2)
C311, C312	374726224	6200pF±5%, 50V, Plastic(TF)
C313, C314	374721824	1800pF±5%, 50V, Plastic(TF)
C315, C316	391941007	10μF, 16V, Elect.(RA2)
C317, C318	354744719	470 μF, 16V, Elect.
C331, C332	373301014	100pF ±5%, 125V, PP
C341, C342	391980227	2.2 μF, 50V, Elect.(RA2)
C343-C346	391941007	10μF, 16V, Elect.(RA2)
C363, C364	391980227	2.2 μF, 50V, Elect.(RA2)
C367	354784799	0.47μF, 50V, Elect.
C369, C370	374726224	6200pF±5%, 50V, Plastic(TF)
C371, C372	391941007	10μF, 16V, Elect.(RA2)
C373	374721224	1200pF±5%, 50V, Plastic(IF)
C374	374721034	0.01μF ±5%, 50V, Plastic(TF)
C376	391941007	10μF, 16V, Elect.(RA2)
C377	374724734	0.047 μF ±5%, 50V, Plastic(TF)
C384	354782299	0.22μF, 50V, Elect.
C391	391980227	2.2 μF, 50V, Elect.(RA2)
C503, C504	391941007	10μF, 16V, Elect.(RA2)
C505, C506	373303314	330pF ±5%, 125V, PP
C507, C508	354742219	220 μF, 16V, Elect.
C515, C516	391980227	2.2 μF, 50V, Elect.(RA2)
C529, C530	374724734	0.047 μF ±5%, 50V, Plastic(TF)
C531, C532	354774709	47μF, 63V, Elect.
C533, C534	373301014	100pF ±5%, 125V, PP
C651, C652	374724734	0.047 μF ±5%, 50V, Plastic(TF)
C905, C906	3504238	1, 0000μF, 56V, Elect.
C907, C908	354761019	100 μF, 35V, Elect.
C909, C910	354744719	470 μF, 16V, Elect.
C912	354763329	3300μF, 35V, Elect.
C914	354744719	470 μF, 16V, Elect.
C915	354751029	1000μF, 25V, Elect.
C917	354724719	470 μF, 6.3V, Elect.
C918	354761019	100 μF, 35V, Elect.
C919, C920	354781019	100 μF, 50V, Elect.
C922	354780339	3.3 μF, 50V, Elect.
C924	354754719	470 μF, 25V, Elect.
	Resistors	
R101	5210221 or	N06HR100KBD
	5210070	Semi-fixed
R102, R202	5210072 or	N06HR220KBD or
	5210222	N06HR200KBD, Semi-fixed
R201	5210216 or	N06HR5KBD or
	5210062	N06HR4.7KBD, Semi-fixed
R529, R530	442522704	27ohm, 1/2W, Metal oxide film
R531, R532	442521014	100ohm, 1/2W, Metal oxide film
R543, R544	442520474	4.7ohm, 1/2W, Metal oxide film
R545, R546	441620474	4.7ohm, 1W, Metal oxide film
R547, R548	441623914	390ohm, 1W, Metal oxide film
R550	442520224	2.2ohm, 1/2W, Metal oxide film
R902, R903	441725114	510ohm, 2W, Metal oxide film
R904, R905	441623314	330ohm, 1W, Metal oxide film
R906	442524794	0.47ohm, 1/2W, Metal oxide film
R907	442520824	8.2ohm, 1/2W, Metal oxide film
R908	442522204	22ohm, 1/2W, Metal oxide film
R912	442522704	27ohm, 1/2W, Metal oxide film
R915	442523314	330ohm, 1/2W, Metal oxide film
R916	442522204	22ohm, 1/2W, Metal oxide film
	Switch	
S301	25065286	NSS-22112, Slide, VCR-2
	Relaies	
RL501, RL502	25065339	NRL-2P5A-DC24-046, Speaker
RL503	25065342	NRL-2P1.25A-DC24-048, Headphone
	Terminals	
P101	25060087	NTM-2PDMN31, Antenna
P301	25045252	NPJ-6PDBL124
P302, P303	25045213	NPJ-6PDBL92
	Plugs	
P401a, P405a	25055133	NPLG-3P117
	Sockets	
JL101	25050272	NSCT-8P100
JL102, JL403	25050268	NSCT-4P96
JL601	25050273	NSCT-9P101
JL602	25050267	NSCT-3P95
	Radiators	
Q901a	27160209	For Q901 and Q902
D901a	27160166	For D901
	Screws	
	82143006	3P+6FN(BC), For Q901a
	82143010	3P+10FN(BC), For D901a
	Bracket	
	27141059	Ground

POWER AMPLIFIER PC BOARD(NAAF-3870-1A)

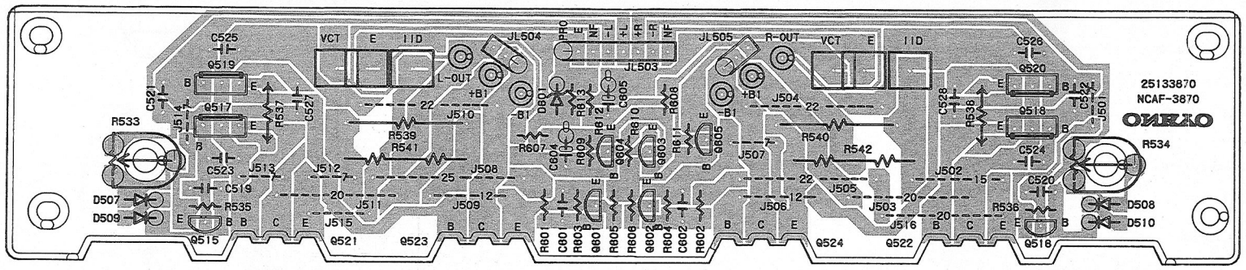
CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q515, Q516	2211183 or	2SC1740-R or
	2211255	2SC1815-GR
Q517, Q518	2201944 or	2SD1763-D or
	2201945	2SD1763-E
Q519, Q520	2201934 or	2SB1186-D or
	2201935	2SB1186-E
Q521, Q522	☆2201653,	2SC3856-O,
	☆2201654,	2SC3856-Y,
	☆2201655,	2SC3856-P,
	☆2202272 or	2SC3907-R or
	☆2202273	2SC3907-O
Q523, Q524	☆2201663,	2SA1492-O,
	☆2201664,	2SA1492-Y,
	☆2201665,	2SA1492-P,
	☆2202262 or	2SA1516-R or
	☆2202263	2SA1516-O
Q601-Q604	2211732 or	2SC1845-F or
	2211733	2SC1845-E
Q605	2211792 or	2SA992-F or
	2211793	2SA992-E
	Diodes	
D507-D510	223163	1SS133
D601	224450512	MTZ5.1B
	Capacitors	
C519-C522	374721034	0.01μF ±5%, 50V, Plastic(TF)
C527, C528	373734734	0.047 μF ±5%, 100V, MKT
C604	354721019	100 μF, 6.3V, Elect.
C605	354700109	1 μF, 160V, Elect.
	Resistors	
R533, R534	5215045	N08HR10KBC, Semi-fixed
R537, R538	442522714	270ohm, 1/2W, Metal oxide film
R539, R540	441720104	1ohm, 2W, Metal oxide film
R541, R542	4500033	0.47ohm, 5W, Metal plate

CAUTION: Replacement for transistor of mark ☆, if necessary, must be made from the same beta group (H_{FE}) as the original type.

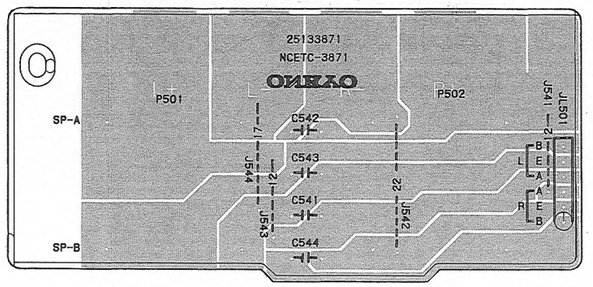
Ex. 2SC3856(O) 2SA1492(O)

Same beta group

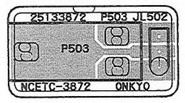
PRINTED CIRCUIT BOARD VIEW FROM BOTTOM SIDE



POWER AMPLIFIER PC BOARD

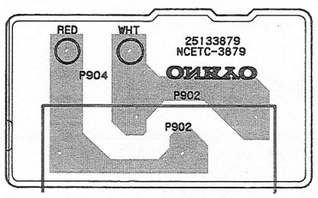


SPEAKER TERMINAL PC BOARD

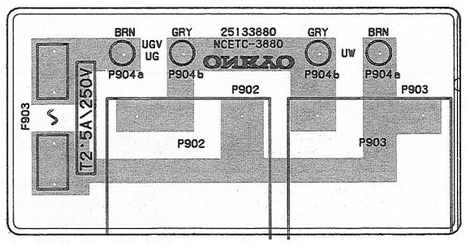


HEADPHONE TERMINAL PC BOARD

VIDEO TERMINAL PC BOARD

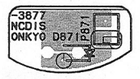


120V MODEL

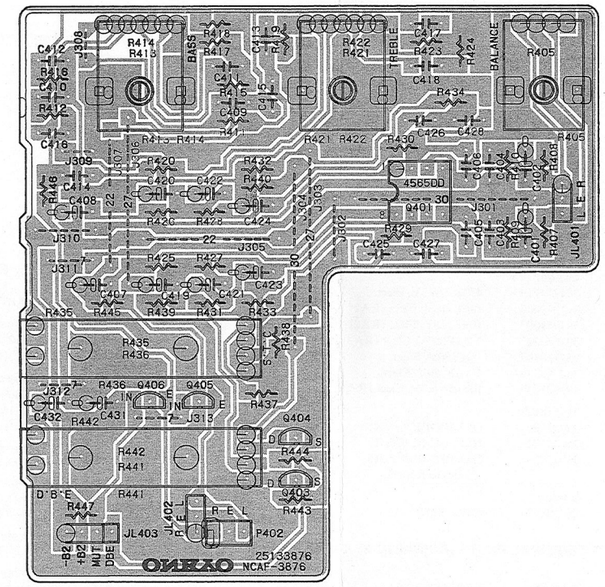


OTHER MODELS

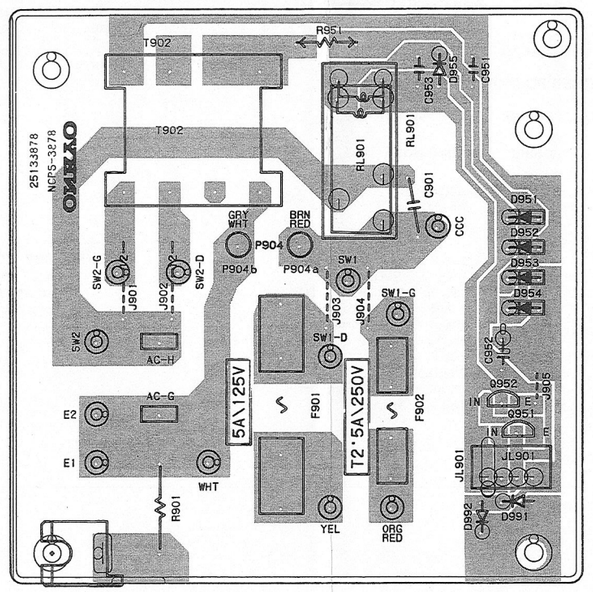
AC OUTLET TERMINAL PC BOARD



VOLUME INDICATOR PC BOARD



PREAMPLIFIER PC BOARD



POWER SUPPLY CIRCUIT PC BOARD

PRINTED CIRCUIT BOARD PARTS LIST

SPEAKER TERMINAL PC BOARD (NAETC-3871-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
P501, P502	25060110	NTM-4PDMN44, Speaker terminals

HEADPHONE TERMINAL PC BOARD (NAETC-3872-1A)

CIRCUIT NO.	PART NO.	DESCRIPTUON
P503	25045255	YKB21-5009, Headphone terminal

VIDEO TERMINAL PC BOARD (NAETC-3873-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q251	2228-0661	4066B
Q281	222780053	78L05
Q282	222-0345	CX20106A
	Transistors	
Q252-Q255	2211183 or	2SC1740-R or
	2211255	2SC1815-GR
Q256	2213074 or	2SA933-R or
	2211455	2SA1015-GR
	Diodes	
D281, D285	223163	1SS133
	Capacitors	
C251, C252	354724719	470 μF, 6.3V, Elect.
C253-C255	391941007	10μF, 16V, Elect.(RA2)
C283	391941007	10μF, 16V, Elect.(RA2)
C284	391980227	2.2 μF, 50V, Elect.(RA2)
C285	354780109	1 μF, 50V, Elect.
C286	354780339	3.3 μF, 50V, Elect.
C289	391921017	100 μF, 6.3V, Elect.(RA2)
	Terminals	
P251	25045192	NPJ-4PDBL76, Video
P271	25045172	HSJ-1003-01-020, RI
P281	25045293	HSJ-1003-01-012, RR (Room to Room)
	Socket	
J1.252	25050267	NSCT-3P95

AC OUTLET TERMINAL PC BOARD(NAETC-3880-1)

CIRCUIT NO.	PART NO.	DESCRIPTION
P902, P903	25050410	⚠ NSCT-2P235, AC outlet
P903a	25050065	⚠ YS11-403T, Fuseholders
P903	252075	⚠ 2.5A-SE-EAK, Primary for AC outlet
P904a	2065543341	Cord ass'y
P904b	2065543348	Cord ass'y

PREAMPLIFIER PC BOARD(NAAF-3876-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q401	22240191	NJM4565D-D
	Transistors	
Q403, Q404	2211945	2SK246-GR
Q405, Q406	2213631 or	RN1241-A or
	2213632	RN1241-B
	Capacitors	
C401, C402	391980227	2.2 μF, 50V, Elect.(RA2)
C407, C408	391941007	10μF, 16V, Elect.(RA2)
C409, C410	374723334	0.033 μF ±5%, 50V, Plastic(TF)
C411, C412	374723344	0.33μF ±5%, 50V, Plastic(TF)
C413, C414	374724724	4700pF±5%, 50V, Plastic(TF)
C417, C418	374723934	0.039 μF ±5%, 50V, Plastic(TF)
C419, C420	391980227	2.2 μF, 50V, Elect.(RA2)
C421-C424	354781099	0.1 μF, 50V, Elect.
C425-C428	374721024	1000pF±5%, 50V, Plastic(TF)
C431, C432	354744709	47μF, 16V, Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Resistors	
R405	5104270	N11RHC250KWT25Z, Variable, BALANCE
R413, R414	5104269	N14RHC50KC25Z, Variable, BASS
R421, R422	5104269	N14RHC50KC25Z, Variable, TREBLE
R435, R436	6182006	N25LGL200KRD10Z, Slide, S.T.C.
R441, R442	6182006	N25LGL200KRD10Z, Slide, D.B.E.

VOLUME INDICATOR PC BOARD (NADIS-3877-1)

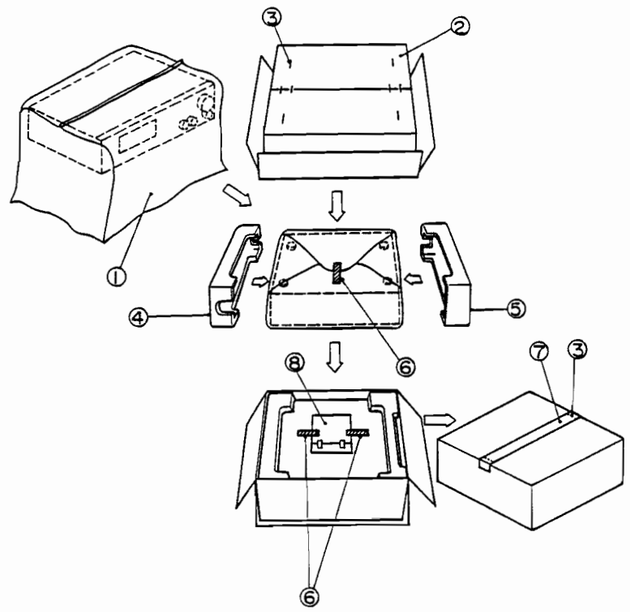
CIRCUIT NO.	PART NO.	DESCRIPTION
D871	225241 or	SEL2210R-C or
	225242	SEL2210R-D, L.E.D.
	27190545	Holder, LED

POWER SUPPLY PC BOARD (NAPS-3878-1A)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Transistors	
Q951	221282	DTC144ES
Q952	2213650	DTD113ZS
	Diodes	
D951-D954	22380035	GP10H003E
D955	223163	1SS133
D991, D992	223163	1SS133
	Transformer	
T902	2300494	⚠ NPT-1049G, Power
	Capacitors	
C901	3500065A	DE7150FZ103PAC400V/125V, 1S
C952	354761019	⚠ 100 μF, 35V, Elect.
	Resistors	
R951	442520824	8.2ohm, 1/2W, Metal oxide film
	Relay	
RL901	25065248	⚠ NRL-1P15A-DC12-29
	Socket	
J1.901	25050268	NSCT-4P96
	Fuseholders	
F902a	25050065	⚠ YS11403T
	Fuse	
F902	252075	⚠ 2.5A-SE-EAK, Primary

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK.REPLACE ONLY WITH PART NUMBER SPECIFIED.

PACKING VIEW



REF. NO.	PART NO.	DESCRIPTION
1	29100034	850 ×650mm, Poly-vinyl bag
2	29052061-1	Master carton box
3	282320	Sealing hook
4	29091263A	Pad R
5	29091262C	Pad L
6	261504	Adhesive tape
7	29110071-1	Damplon tape
8	Accessary bag ass'y	
	29341517	Instruction manual
	292092	FM antenna
	232140	NMA-3057, AM loop antenna
	2010200	Connection cord for RI
	3010124	UM-4, Two batteries
	24140171	RC-171S, Remote control transmitter
	29100097	250 ×350mm, Poly-vinyl bag
	29365020A	Warranty card
	29100094A	Poly-vinyl bag for warranty card

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A-004 Printed in Japan